

**Tema broja / Topic:****EKOHISTORIJA RIJEKE DRAVE****ENVIRONMENTAL HISTORY OF THE DRAVA RIVER****CASTLES, SETTLEMENTS AND ENVIRONMENT IN THE DRAVA VALLEY: CASE STUDIES FROM THE MEDIEVAL AND OTTOMAN PERIOD****UTVRDE I NASELJA U DOLINI DRAVE: STUDIJE SLUČAJA IZ SREDNJOVJEKOVNOG I OSMANSKOG RAZDOBLJA****Csilla ZATYKÓ****Gyöngyi KOVÁCS**

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**SUMMARY**

*The Drava valley has numerous unique features as a historical and geographical region. The fullest possible understanding of its characteristics is a task for us in the present and the future. In our study, we present the results of research carried out in three different areas that not only geographically characterize certain parts of the Drava valley, but the research methods employed also highlight important aspects of the region's castles, as well as its settlement and environmental history as reflected by the available resources. The results of historical, archaeological and scientific studies demonstrate that the river not only separates but also connects. It joins regions and communities and is a dominant feature in the region from this aspect as well (Figure 1).<sup>1</sup>*

**Keywords:** Drava, Berzence, Barcs, Szigetvár, medieval and Ottoman period**Ključne riječi:** Drava, Brežnica, Barč, Siget, srednji vijek i osmanski period**BERZENCE**

The archaeological, historical, geomorphological and geoarchaeological investigations of the Berzence region in the Middle Drava Valley was initiated with a dual purpose. On the one hand, it

<sup>1</sup> The authors of the chapters are: Berzence and its region: Csilla Zatykó; Barcs and its region: Gyöngyi Kovács and Márton Rózsás; Szigetvár: Gyöngyi Kovács.



Fig. 1. Sites of investigations in the Drava valley region

finds the Inner Somogy Hills covered with drifting sand, which are separated from the floodplain of the Drava valley found in the south by a high flood-free bank of varying altitude (10–30 metres).

### The castle and its estate

When exploring the history of Berzence and its region, one cannot separate the history of the settlement from that of the Berzence castle and estate. The earliest charter to mention the area is known from 1193, when King Béla III confirmed the estates of the Johannites who settled in Hungary. From these estates, the Csurgó estate belongs to the early acquisitions.<sup>2</sup> The perambulation of the Csurgó area mentions the neighbouring *Sorcod* (now Sarkad, near Csurgó), *Libanz* (now Lipótháza, near Berzence), and *Sidala* (now Zsdála/Ždala) streams, numerous ponds and watercourses. In addition, the charter also refers to the royal swineherds (*subulci nostri*) living there.

The earliest written document to mention Berzence dates to 1230. It is referred to as a settlement concerned in the lawsuit between the Pannonhalma Abbey and the Veszprém Chapter over the tithe,<sup>3</sup> and it also appears in the papal tithe list of the years between 1332 and 1337. In 1377 Lóránd of Berzence from the Pécz kindred obtained Berzence and landed properties belonging to that. As a result of the acquisition, there are two division terriers providing very detailed descriptions.<sup>4</sup>

The charter dividing Berzence mentions a castle and a piece of land lying under that,<sup>5</sup> which is also divided into three equal parts. Works on the history of the castle(s) in Berzence do not mention the 1377 reference to the castle, but the available written sources are interpreted in different ways. Pál Engel and Tibor Koppány regard the charter issued in 1444 mentioning Demeter castellan (*castellanus*) of Berzence as the earliest evidence to the existence of the Berzence castle.<sup>6</sup> Richárd Horváth, however, suggests in his work publishing the 1468 building permit of the Berzence castle that the data from 1444 refers to another fort or castle in Berzence, which was erected before the castle known today.<sup>7</sup> He identifies this early castle mentioned in 1444 with the castle of the nearby Szentersébet, citing that »Szentersébet and Berzence practically formed one settlement«. The castle of Szentersébet appears in the 1468 building permit, which says that the new fort was built in Berzence because the castle of Sándor Lórándfi

<sup>2</sup> CD 1829–1844 II. 285; Engel 2001.

<sup>3</sup> ÁÚO I. 166: »in villa Birzence sunt XL mansiones«.

<sup>4</sup> MNL OL DL 6418, MNL OL DL 6419: Borsa 1999, 32–36.

<sup>5</sup> MNL OL DL 6419: »Item sub castro una pars terre filiis Marci ...«.

<sup>6</sup> Engel 1996, I. 278; Koppány 1999, 119–120; C. Tóth 2004, 12/953.

<sup>7</sup> Horváth 2005, 13–21.

of Berzence possessed first in Musina and later transferred to Szenterzsébet estate in turbulent times proved to be small.<sup>8</sup>

The close proximity of Szenterzsébet and Berzence was also proposed formerly by Tibor Koppány, when he located the castle of Szenterzsébet in the field Jalszina, southwest of the inner part of Berzence.<sup>9</sup> However, there is no archeological evidence relating to the existence of a fort or castle there, although it is known that the Szenterzsébet castle was described as an abandoned fort (*Herrschaft*) in the 1699 terrier.<sup>10</sup>

The question how the castle »disappeared without trace« from the territory of Berzence may be answered with Croatian research results. Historical and archaeological literature in Croatia does not identify the Szenterzsébet castle with the Berzence fort, but rather with the remains of the former fortification located in the Pepelare part of the settlement Ždala (Croatia), on the opposite bank of the Zsdála (Ždala) stream<sup>11</sup> (Figure 2). Based on its structural features and archaeological finds, the castle was used during the 13–16<sup>th</sup> centuries.<sup>12</sup> The Szenterzsébet castle can be detected in written sources from the first half of the 13<sup>th</sup> century to the first half of the 16<sup>th</sup> century.

It is still present in documents in 1525 and 1526,<sup>13</sup> but it was abandoned at the end of the 17<sup>th</sup> century. The fact that the Szenterzsébet castle is located on the opposite side of the Zsdála stream supports that there was indeed a castle in Berzence before 1468 (at the time of the 1377 and 1444 references), but this can presumably be identified neither with the modern Berzence fort, nor with the Szenterzsébet castle. However, on the basis of currently available data, we cannot tell anything else. The identification of the early castle dated to the 14<sup>th</sup> century requires further investigations.

The Berzence castle and estate became almost permanently a battlefield from the 1530s onwards. The Ottomans first occupied the stronghold in 1532. Subsequently, its proprietors frequently changed. After the Ottoman occupation of Buda in 1541, it was strengthened by Italian military engineers. In 1547 Márk



Fig. 2. The castle of Szenterzsébet on a satellite image and on the First Military Survey, 1782

<sup>8</sup> ... castellum ipsum, ne exinde si propter eorum inhabilitatem ad manus alienas devenisse contingeret, regno et regnicolis nostris damna et incommoda committerentur, funditus distraxissent et in possessione Sentersebeth erectum transtulissent. ... Horváth 2005, 16, 20–21.

<sup>9</sup> Koppány 1999, 217–218.

<sup>10</sup> Szent Erzsébet »der deserten Herrschaft Bersenz«. Urbaria et Conscriptiones 500.

<sup>11</sup> Krešimir 2002; Večenaj-Tišlarov 1989.

<sup>12</sup> Kolar 1976; Horvat 2010, 43–61: The author discusses the castle among fortifications dated before the Mongol Invasion, but he assumes that it was a royal foundation with a square-shaped groundplan that can be connected with the castle building activity of King Béla IV after the Mongol Invasion.

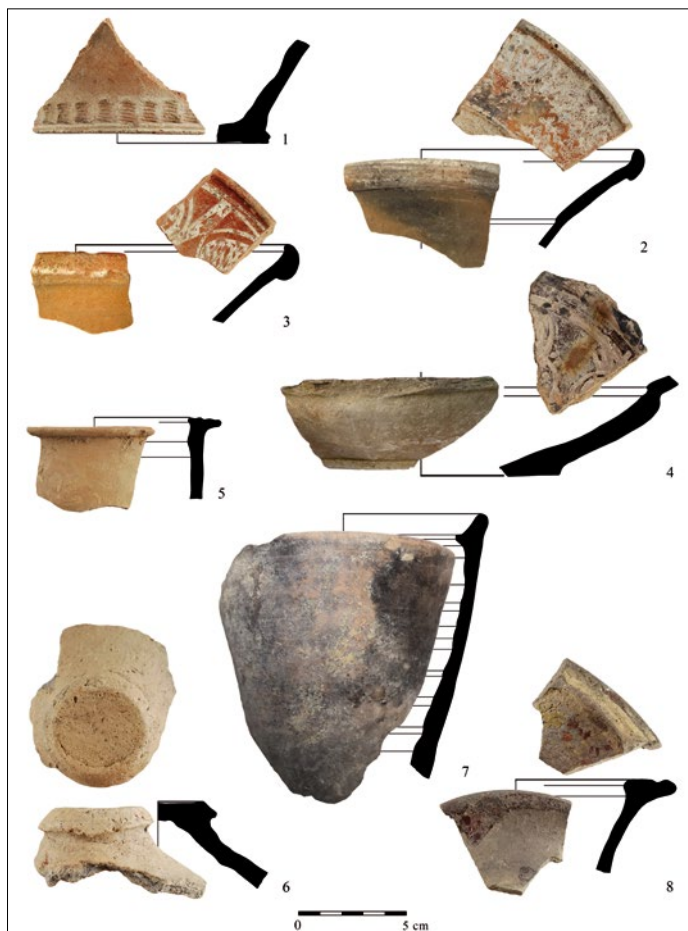
<sup>13</sup> 1220: It is the estate of King Andrew II called Maragha, Margy. It is referred to as castrum St. Elizabet in 1235: Večenaj-Tišlarov 1989, 140; Csánki 2011, 697–698. In 1333 it is an estate of Stephen, son of Mikac Mihaljević, Ban of Slavonia: Petrić 1992, 42. In 1332–1334 it is an already existing settlement: Magyar – Nováki 2005; 1527: Magyar – Nováki 2005.



Horváth Stancsics defended Berzence with an army of about one hundred hussars, which became part of the line of fortresses defending Szigetvár paid from Styria after the 1555–56 campaigns in South Transdanubia.<sup>14</sup> It was occupied by the Ottomans between 1566 and 1686, but during the Fifteen Years' War and in 1664 it had several proprietors. Beginning with the year 1569, we have a detailed pay-roll of the Ottoman guards, as well as an account of military pay of the Treasury in Buda. Until the occupation of Kanizsa, Berzence had belonged to the *sanjak* of Szigetvár. After 1600, it became part of the Kanizsa *vilayet* along with the Szigetvár *sanjak*.<sup>15</sup>

According to the contemporary record by Pál Esterházy, the fortress was standing on a high hill. It had broad, deep, natural ditches and timber-and-earth bastions.<sup>16</sup> Evliya Çelebi reports about the castle after the winter campaign as follows: »The castle burned to the ground. It had had a massive sevenfold rampart, but only a brick mosque and a bath remained. To the southeast and west of the castle, there is a swamp that takes two hours to cross. The inner castle also burned down; it was repaired by [...] five thousand *rayahs* from Požega and Jakova.«<sup>17</sup>

The mound of the Berzence castle is found in the inner area of the village, in a territory flanked by Kinizsi utca ('street') and Lipéki-árok ('ditch'), and still needs thorough archaeological investigation. Some parts of the castle and its history have been revealed by minor archaeological observations and rescue excavations.<sup>18</sup> Our observations made on an adjacent plot (2 Kinizsi utca), at the southwestern part of the mound measuring about 120×100 m revealed traces of brick walls, a bastion corner and the negative imprint of wooden posts could be discovered in the wall section of the mound. The 16–17<sup>th</sup> century finds falling out of the wall of the castle mound to the house plot at 2 Kinizsi utca comprised fragments of an Ottoman pedestal bowl and a Bosnian pottery vessel with stamped decoration, as well as sherds of painted plates and beaker-shaped stove eyes, bell-shaped baking covers and a cannonball (Figure 3).<sup>19</sup>



**Fig. 3.** Pottery sherds collected on the territory of the Berzence fortress. Photograph by: Fanni Fazekas, drawing by: Friderika Horváth

<sup>14</sup> Magyar – Nováki 2005, 38.

<sup>15</sup> Hegyi 2007, II. 1320–1326, III. 1584–1589.

<sup>16</sup> Esterházy 1989, 137. See Figure 11.1.

<sup>17</sup> Evlia 1985, 555.

<sup>18</sup> Magyar – Nováki 2005, 39; Kálmán Magyar: RRM RA 1740, 4307/180, Magyar 1996, 141–143; Szilvia Honti: RRM RA 4335/1980, Koppány 1999, 119–120.

<sup>19</sup> We are grateful to Ferenc Szoboticsanecz (2 Kinizsi utca, Berzence), who collected the finds and handed them over to us.

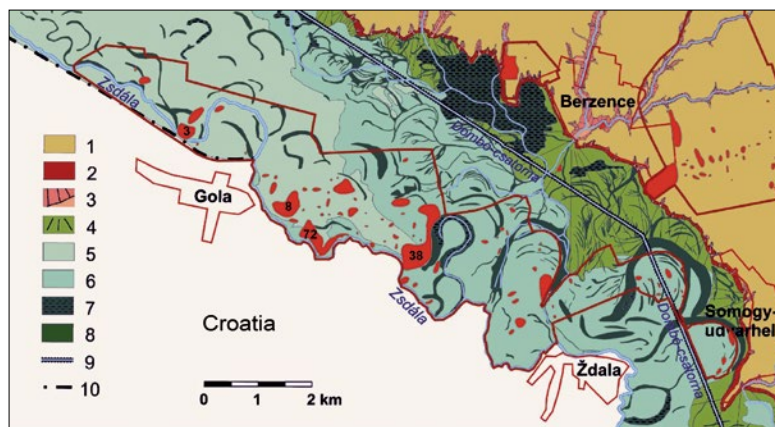
## The castle and its surroundings

The survey of medieval landscape use, settlement structure and farming methods of Berzence and its region covered two geographically distinctly different small regions. In the north one finds the Inner Somogy Hills covered with sand, which is separated from the floodplain of the Drava valley by a flood-free bank underwashed by the former Drava River. Before the construction of the Dombó channel in the 19<sup>th</sup> century, the minor watercourses and streams descending from the Inner Somogy area forked into several branches on the gentle slopes of the plain. It was not only due to the rivers but also the higher groundwater that the area had more abundant water supply, and the former meanders of the Drava River and flatlands were covered with water. Swamps and lakes evolved in them.<sup>20</sup>

The results of archaeological field survey suggest that the floodplain was a densely populated area in the Middle Ages: among the four major settlements located along the Zsdála stream there are several minor and small-intensity sites (Figure 4).

One of the larger settlements recorded as site No. 3 can be identified with medieval Lankóc on the basis of field name evidence.<sup>21</sup> The settlement appears in written sources from 1263 on. At the time of its appearance as Felső and Alsó Lakancz in the 1696 terrier,<sup>22</sup> it had already been abandoned. We found three large fragments of Bronze Age vessels and a large amount of medieval pottery sherds at the site located in the loop of the Zsdála stream. The continuous use of the hand-turned wheel in the region – as demonstrated by investigations near Barcs – normally makes it difficult to determine a close chronology within the Middle Ages, but site No. 3 is one of those few sites where artefacts dated to the Árpád Period were also discovered. Sites No. 8 and 72 located by the Zsdála stream, approximately 500 m from each other yielded predominantly 15–16<sup>th</sup> century finds. The largest and perhaps most productive medieval settlement is site No. 38. At the southern part of the territory, along the bank of the Zsdála stream we gathered mainly typical late medieval pottery sherds, some of which could be dated more closely to the 15–16<sup>th</sup> centuries. The sherds sometimes were found in concentrated spots, presumably at the sites of the former houses (Figure 5).

The distribution of the minor sites between the larger settlements is denser and more even in the western, higher parts of the territory, whereas in the eastern and lower parts fewer such sites could be observed. It can be clearly seen that in the waterlogged territory there were fewer flood-free, dry pieces of land available for settlements in the Middle Ages, and we may postulate the existence of short-lived, temporary sites there.



**Fig. 4.** Sites shown on the map of reconstructed hydrographic conditions before the regulation of watercourses. 1: alluvial plain with wind-blown sand forms, 2: escarpments, 3: stream valleys and gullies, 4: alluvial fans, 5: higher alluvial plain, 6: lower alluvial plain, 7: wetlands and marshy areas, 8: low-lying paleochannels and channels of the perennial and ephemeral streams, 9: Dombó-csatorna, 10: Hungarian-Croatian border (after Viczián – Zatykó 2011)

<sup>20</sup> Viczián – Zatykó 2011.

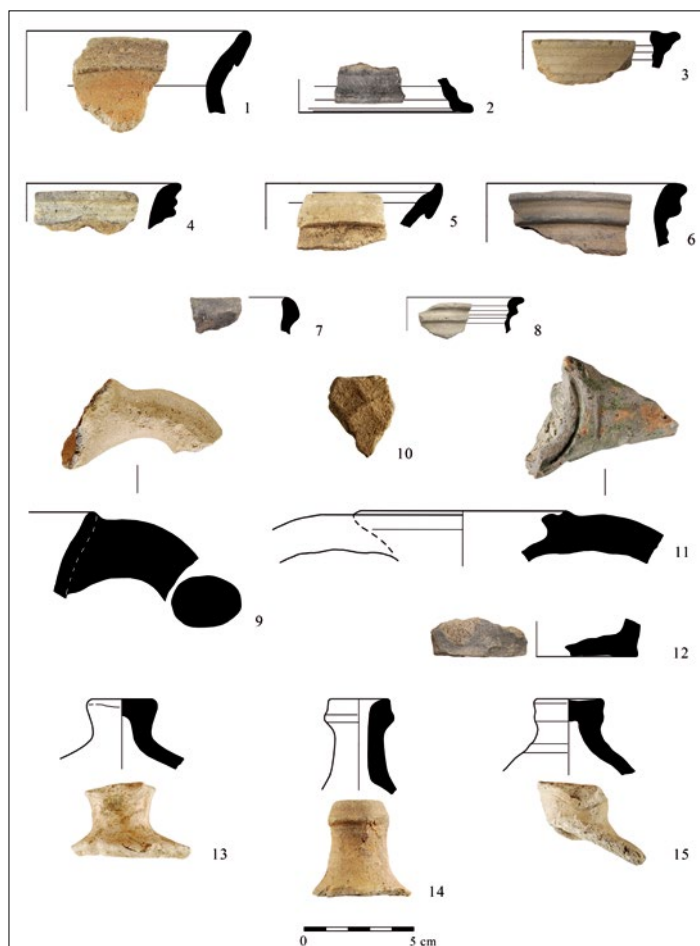
<sup>21</sup> Végh 1974, 642, 205, 160.

<sup>22</sup> 1696 UC 7:41a (reg). Urbaria et conscriptiones.

The 1377 letter of division<sup>23</sup> mentioned above also describes the floodplain south of Berzence as a territory covered relatively densely by small, scattered settlements. The document provides an insight into some details of the utilization of a special floodplain landscape: the terrier of the five settlements around Berzence lists altogether eighteen fishponds (*piscina*), twenty fish traps (*capture pisscium vulgariter gerge*), as well as about thirty fishing places (*strug*), most of which are mentioned by the source as fishponds constructed along the river. The word *gergye* mentioned in the terrier is the simplest method of trap fishing. It refers to a fish trap made from sticks and earth set up in the shallow water of dead channels and oxbowlakes in the tidal area. The term *strug* comes from the Slavic word *struga*, meaning riverbed and watercourse. It is shown by early maps as a channel, a ditch forking off from the main riverbed. The terminology and descriptions found in our document refer to the phenomena of floodplain management, oxbow lake fish management, trap fishing that were spread in a large part of the area.

The results of the archaeological field walking survey have drawn our attention to another phenomenon of landscape use in wetlands in the Árpád Period. Particularly the eastern, low-lying sites, which were often located along the meanders of the Drava valley yielded large quantities of iron slags, iron lumps, and pieces of tuyeres used with the iron smelting furnaces. The situation of the sites suggests the local manufacturing of bog iron ores forming in marshy, waterlogged areas with high groundwater level.

The area extending from Csurgó to the Drava is known as the land of royal swineherds in the Middle Ages. The existence of extensive oak woods in the region is supported by the pollen analyses of environmental archaeological investigations. The proportion of oak trees in the Lankóci forest by Berzence must have been 50–60% in medieval times. In addition to the utilization of forests for the mast-feeding of pigs, Pál Sümegi and his colleagues were able to reconstruct tree felling at intervals of 100–110 years from the cyclical decline in the proportion of timber tree pollens at the site between the 10<sup>th</sup> and 15<sup>th</sup> centuries.<sup>24</sup> Since the length of the cycles corresponds to the maturation period of timber trees in Hungarian environment, what we encounter here are probably the signs of shifting cultivation in large estate management.



**Fig. 5.** Artefacts from site No. 38, Berzence. Photograph by: Fanni Fazekas, drawing by: Friderika Horváth

<sup>23</sup> MNL OL DL 6419.

<sup>24</sup> Sümegi et al. 2016.



## BARCS

### Surveys around Barcs

The study of Barcs and its surrounding region has focused on the Ottoman palisade fort of Barcs since 1989. At the same time, in the wider region of Barcs more or less regular field surveys and topographical investigations were started nearly two decades earlier. In the mid-1970s Dénes Jankovich-B. conducted field walking in the Rinya valley. This survey covered largely the territory to the north-northwest of Barcs.<sup>25</sup> His findings are fundamental, but they can be significantly expanded and refined by recent research.

In 1974 we started the survey of archaeological sites at Barcs and in its vicinity. The 13–16<sup>th</sup> century archaeological sites provide important data for the reconstruction of medieval settlement network in the region. In addition, finds collected at the sites help to identify the characteristics of medieval and early modern rural ceramics in the Drava region, which is still a grey area in pottery research. Medieval find material gathered around Barcs can also complete the picture gained from pottery sherds collected during field walking surveys around Berzence.

The processing work preceding this study was focused on eight archaeological sites (the sites of former settlements) that yielded (among other things) 14–17<sup>th</sup> century artefacts. These sites are: Barcs-Vukovári mező ('meadow'); Barcs-Pusztabarcs ('deserted Barcs'); Barcs-Szelistye; Barcs-Szilítanya; Drávaszentes-Kenderföld; Somogytarnóca-Kistarnóca; Somogytarnóca-Alsógyörgyös; Komlósd-Szőlőhegy ('vineyard') (Figure 6).

From these, Barcs-Vukovári mező and Barcs-Pusztabarcs were subjected to minor archaeological excavations. At this latter site, which has been destroyed by a sand quarry by now, we were able to uncover only a few features in the framework of rescue excavations.

All the late medieval and early modern settlements surveyed by us were found along permanent watercourses. Although the contemporary hydrological conditions of the territory are little known, the current features of terrain suggest that there were probably several small intermittent or permanent streams that have disappeared by now. The Drava River, being a major watercourse, was certainly dominant in the region. The pieces of dry land and hills surrounded by the numerous distributaries of the river in the floodplain offered an excellent, protected environment for settlement. Artefacts dated to different periods clearly show that the principles of settle-



**Fig. 6.** Sites around Barcs mentioned in the text: 1. Komlósd-Szőlőhegy, 2. Somogytarnóca-Alsógyörgyös, 3. Somogytarnóca-Kistarnóca, 4. Drávaszentes-Kenderföld, 5. Barcs-Vukovári mező, 6. Barcs-Szilítanya, 7. Barcs-Pusztabarcs, 8. Barcs-Szelistye. The site of the Ottoman fort is indicated by the arrow.

<sup>25</sup> Jankovich 1976.

ment site selection remained almost unchanged for thousands of years: a hill or plateau next to a watercourse yet protected from floods, an area large enough for farming, as well as the proximity or adjacency of roads or river crossing places were of fundamental importance. The medieval settlement structure of the region can also be described as a relatively dense network of small villages. We can infer to the existence of settlements of considerable size only in the case of a few sites.<sup>26</sup> It can be observed that the life of some medieval villages started in the Árpád Period and ended in the middle of the 16<sup>th</sup> century. They were destroyed due to the Ottoman campaigns and expansion (the 1532 campaign, and the fall of Babócsa in 1555 and the fall of Szigetvár in 1566), as the traditional marching route of the Ottoman troops along the Drava River affected the region. The find material of only a few sites provided evidence to that the settlement existed at the time of the Ottoman occupation, or even survived that, or was re-settled.

Medieval artefacts from the sites in question comprise various types of earthenware in terms of function. On the one hand, there are 14–15<sup>th</sup> century cooking and storage vessels (mainly pots), mostly brownish-grey, grey, orange or brick-coloured, and their material is clay mixed with grey, micaceous river sand typical of the Drava valley. They are technically well-executed, although some of them could be still made on a slow (hand-turned) wheel – which is suggested, among other things, by their bottom stamps. Their decoration is a spiral line around the body, wavy lines, rouletting, furrow-stitch decoration, and sometimes a combination of all these. Some of the pots are completely undecorated. The material of large containers is coarser, and their material is tempered with small pebbles or crushed stone.<sup>27</sup>

There is a completely different group of sherds, which are from the same period, but they differ in terms of their material, shape and production techniques from the types above. The fragments belonging mainly to pots are brownish or greyish, and their material is fine or mixed with coarse micaceous sand. Their wide rims are slightly segmented or not segmented at all, and the inner part of the rim is sometimes multiple faceted. All the pieces were made on a hand-turned (slow) wheel. Several sites yielded pottery with nearly identical rims, which may as well have been the products of the same workshop.

Both types of pots include special pieces, where the inner side of the rim bears an incised or scratched X-shaped mark or a pair of them. These can be interpreted as apotropaic signs, ownership



**Fig. 7.** 15–16<sup>th</sup> century artefacts from the site Barcs-Vukovári mező  
Photograph by: Fanni Fazekas, drawing by: Magda Éber

<sup>26</sup> Here we primarily mean archaeological sites Barcs-Vukovári mező, Barcs-Pusztabarcs and Barcs-Szilítanya.

<sup>27</sup> For the petrographic analysis of the pottery sherds, see: Kreiter – Pánczél 2016, 119–124.





**Fig. 8.** 14–15<sup>th</sup> century artefacts from the site Drávaszentes-Kenderföld. Photograph by: Fanni Fazekas, drawing by: Magda Éber

marks, but they can also be the signs of a master or workshop.<sup>28</sup>

Tableware (food serving and dining vessels) are represented by the fragments of jugs, flagons and cups (goblets). Their surface is coated with white engobe, which show traces of red and black, geometric, painted patterns. Some of the drinking cups and goblets are wheel-thrown from off-white, fine, kaolinitic clay. Some pieces are extremely thin-walled. Fragments of bell-shaped baking covers and clay balls were discovered at several sites. The material collected during field walking also comprises fragments of 15–16<sup>th</sup> century imported ceramics (faience, Loštice and Viennese pottery), yet small in number (Figures 7–9).

Pots dated to the 16–17<sup>th</sup> centuries were made on a fast wheel. They are thin-walled, yellowish or brownish, well-formed and burnt pieces. It is also worth mentioning the fragments of coloured glazed bowls discovered in a 17<sup>th</sup> century refuse pit at the site Barcs-Pusztabarcs.<sup>29</sup>

Finds discussed here represent the pottery use (pottery workmanship) of a relatively small region. It

is conspicuous that the majority of the sites yielded by and large similar ceramics in terms of function and typology. The examination of the material discovered in closed assemblages (features) reveals that in the late Middle Ages ceramic vessels formed on slow and fast wheels were used at the same time, in parallel, yet they were probably made at different places.<sup>30</sup> The survival of hand-thrown pots after the Árpád Period in the region reflect a local or even regional phenomenon.<sup>31</sup>

The site called Pusztabarcs has features dated to the late Middle Ages and the Ottoman period. The features of both periods contained earthenware formed on slow and fast wheels. However, 14–15<sup>th</sup> century hand-thrown vessels differ from those dated to the 16<sup>th</sup> and 17<sup>th</sup> centuries. The latter do not follow the characteristics of earlier hand-thrown pots produced in the Drava valley, but rather bear the traits of ceramics called »Balkan type« or »Southern Slavic« in Hungarian literature, which appeared as a new

<sup>28</sup> Rózsás 1993.

<sup>29</sup> Rózsás 2006, Fig. 18.

<sup>30</sup> From the aspect of the centres of supply and manufacture, the neighbouring Babócsa and Szigetvár, and, on the other side of the Drava River, settlements, e. g. Verőce (now Virovitica, Croatia) should be considered. However, one cannot rule out more distant sites, such as Pécs and Eszék (now Osijek, Croatia), either. The question of the workshop can be answered after the fullest possible processing of late medieval find assemblages from South Transdanubia and Croatia.

<sup>31</sup> For analogues to the 15–17<sup>th</sup> ceramics from the Drava valley in Croatia, see: e.g. Radić – Bojčić 2004, e.g. kat. nos 307, 320, 327, 331, 464–482, 489; Salajić 2014, 36–49. See also artefacts in some studies published in the volume *Srednjovjekovna naselja* 2017.

type of pottery in South Transdanubia annexed to the Ottoman Empire. Hand-thrown pottery types dated before the Ottoman occupation are completely missing from Ottoman-era closed assemblages. It appears that after the Ottoman settlement, late medieval (partly presumably locally-made) hand-thrown ceramics receded into the background, and its place was taken over by a different type of pottery, the Ottoman-era Balkanic type ceramics, which was also predominantly made in the region.

### The medieval castle

Historical sources hold references to a stronghold at Barcs beginning with the 15<sup>th</sup> century. Nevertheless, it was not until these last few decades that investigations, mainly archaeological excavations, excluded the identity of the medieval castle and the Ottoman fort with absolute certainty. The medieval castle was mentioned as the *castellum* of the Bakonyai family in 1460, while in 1472 the *castrum Barch* was possessed by Gergely Gáji Horváth. In

1480 and 1498 it was again referred to as *castellum Barcz*. The last known piece of information about the stronghold before the occupation of Szigetvár is dated to 1561, when it was governed by the castellan of Szigetvár along with other castles (Vízvár, Berzence, Babócsa, and Csurgó).<sup>32</sup> It was most likely destroyed and abandoned in 1566, after Szigetvár had come under Ottoman rule.

At an early stage of the research, it was assumed that the Ottomans had fortified the medieval *castellum*, and its site was sought in the fields of Barcs-Vukovári mező, northwest of modern Barcs. A minor excavation carried out in 1992 in the region brought to light the remains of the church of medieval Valkó,<sup>33</sup> but there was no trace of the castle. However, an Ottoman-era fort site was identified by the investigations led by Márton Rózsás in the 1970s. It was located in the centre of Barcs, to the southwest of the Roman Catholic church, on the former flood-free bank of the Drava River (see Figures 6, 10).<sup>34</sup> The results of the excavations confirmed this,<sup>35</sup> and they also proved that the Ottomans did not fortify



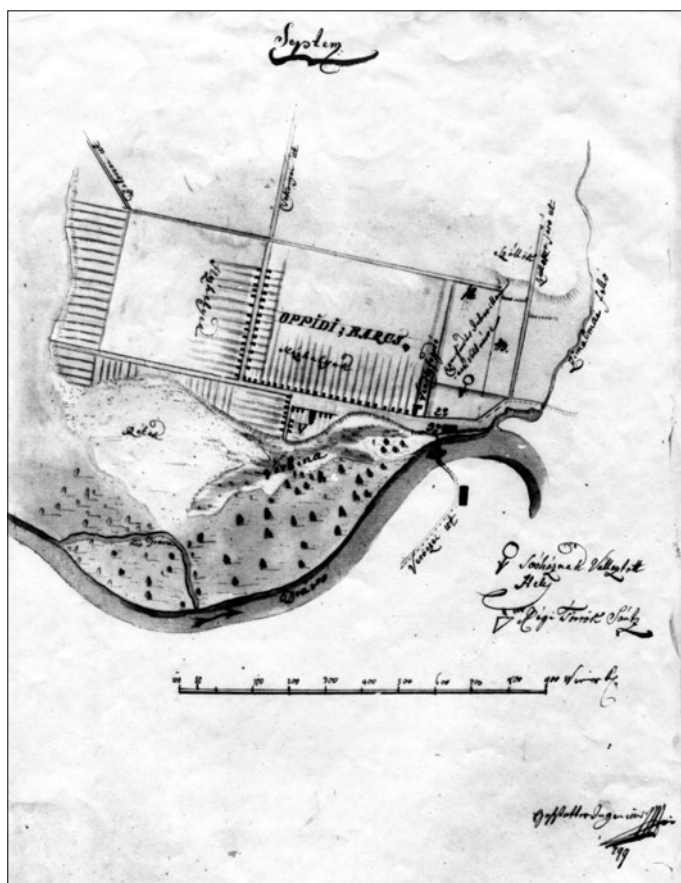
**Fig. 9.** Artefacts from a 15<sup>th</sup> century pit at the site Barcs-Pusztabarcs. Photograph by: Fanni Fazekas drawing by: Magda Éber

<sup>32</sup> For a summary about the medieval castle, see: Kovács – Rózsás 1996, 180: note 25.

<sup>33</sup> M. Aradi – Rózsás 1994.

<sup>34</sup> A local map from 1799 indicates the location of the fort as »Régi Törrök Sántz« (i.e. 'Old Turkish Rampart') within the garden of the Barcs parish church. This map, the various 17–19<sup>th</sup> century written records, as well as the large quantities of Ottoman-era pottery sherds and other finds provided substantial evidence for subsequent research. Kovács – Rózsás 1996, 165, and 180: notes 28–32.

<sup>35</sup> Kovács – Rózsás 1996; Kovács – Rózsás 2010.



**Fig. 10.** The filled riverbed and the site of the Ottoman fort at Barcs on a map from 1799. After Kovács – Rózsás 1996, Fig. 2.b

the medieval *castellum*, but rather they erected a completely new palisade fort by the river. The location of the two strongholds was different.

The site of the medieval castle was identified outside Barcs. It was located by Pál Engel in the territory of Szentmihályfa puszta ('uninhabited land') belonging to Kétújfalu village (now in County Baranya).<sup>36</sup> The fortification with ditch and rampart defences standing out of the floodplain was recorded by Zsuzsa Miklós with aerial photography, and she surveyed it in 2012. Local inhabitants call it Török-domb ('Turkish mound'), and it is marked on the Second Military Survey as Jágó-hegy ('Jágó hill').<sup>37</sup>

### The Ottoman-era fort and its surroundings

The Ottoman palisade fort was built next to the Drava River in 1567. It was part of the South Transdanubian border fortress system of the Ottoman Empire, an outpost fort of Szigetvár, a small military camp by the river, which protected the hinterland of Szigetvár,

and also Kanizsa after 1600. It had an important role: in the same year of its building the Drava flotilla stationed in Eszék (Osijek, Croatia) came under its control, which represented a threat to Kanizsa and its surroundings, to the area of Međimurje, and indirectly to Styria in the 16<sup>th</sup> century.<sup>38</sup>

As research by Klára Hegyi demonstrates, the Ottoman written sources and soldiers' pay-roll provide data on the number, composition, and origin of the garrison. According to the testimony of sources, soldiers were transferred from three castles near Verőce (Virovitica, Croatia), that is from Brezovica, Moslavina and Sopje to Szigetvár and Barcs in an early period, in 1568–69.<sup>39</sup> During its existence, the garrison of the Barcs castle was made up of 160–220 people, most of whom were infantrymen called Azaps and marauders serving on and by the water, and a small part of them were cavalymen and artillerymen.<sup>40</sup> The pay-rolls show that a significant number of soldiers came from the Balkans.

The palisade fort was burned to the ground first in 1595, at the time of the Long War (1593–1606), and secondly in 1664, during the winter campaign led by Miklós Zrínyi along the Drava, when it was finally destroyed. There are only a few written records and a depiction of the fort in historical sources. This latter was made in 1664, during the winter campaign of Miklós Zrínyi. The ink drawing can be found in the volume *Mars Hungaricus* by Pál Esterházy. It is only a sketch (Figure 11.2), but the draw-

<sup>36</sup> Koppány 1999, 114–115.

<sup>37</sup> Miklós 2014.

<sup>38</sup> Kovács – Rózsás 1996, 163, and 179: notes 8–9, with further literature.

<sup>39</sup> Hegyi 2006, 97.

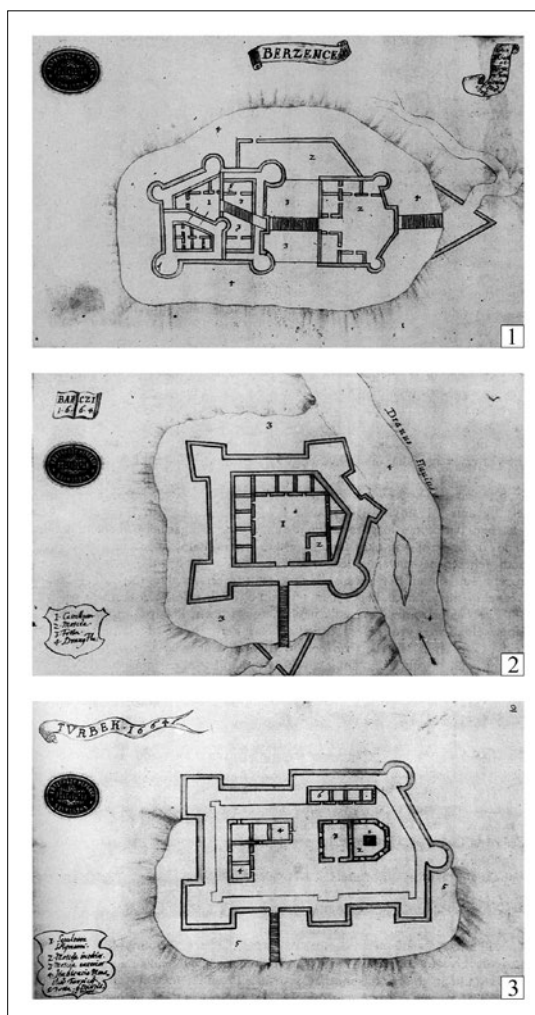
<sup>40</sup> Hegyi 2007, II. 1327–1329, III. 1590–1594.



ing has realistic elements and due to the results of archaeological excavations, dimensions and direction could be assigned to that.<sup>41</sup> The location of the mosque is still not known. The magnetometer survey carried out in the southern part of the fort in 2017 could not identify that, either.<sup>42</sup>

During the archaeological investigations (1989–1994, 2002–2003),<sup>43</sup> it was possible to observe the structure of the castle walls constructed from poles and earth filling, and also to reconstruct the daily life of the Ottoman garrison. The archaeological material reflects a village-like settlement connected with many strands to the Balkans, which had natural links with the nearby civilian settlement having a significant number of South Slav inhabitants.<sup>44</sup> Due to the trade routes along the Drava and the Danube, it was also connected with inner territories of the Ottoman Empire. The Drava provided connections with nearby settlements on the opposite side of the river (e.g. Verőce) and bigger cities such as Eszék or Belgrade. In addition to bulk goods – which can also be found in other South-Transdanubian Ottoman castles and towns, such as Berzence, Babócsa, Szigetvár and Pécs – several special and unique objects came to light, such as the walrus ivory belt plaque, which was presumably made in Istanbul. The analysis of the finds showed that the commodities of the Habsburg Monarchy (e.g. Steyr knives) also arrived in the fort.

Environment historical studies by Pál Sümegi and his colleagues in test areas selected in the Drava valley between 2008 and 2013, including the area of Barcs, demonstrated that below the Barcs fort the meander of the Drava started to be cut off at the end of the 16<sup>th</sup> century, but it is also probable that its riverbed was filled with live water only during floods at the end of the 16<sup>th</sup> century (Figures 10, 12).<sup>45</sup> Archaeological data from excavations show that the fort was not rebuilt in its full strength after its destruction at the end of the 16<sup>th</sup> century. The reason for this was, on the one hand, that the stronghold was naturally protected by the swamping riverbed of the Drava, and on the other hand its significance decreased. After the occupation of Kanizsa (1600), the fort became second-rate, and due to the gradual filling up of the Drava riverbed, it had lost its function as a port by the 17<sup>th</sup> century. Shipping shifted to the south, which could have affected the lives of people



**Fig. 11.** The forts of Berzence (1), Barcs (2) and Szigetvár (3) in the *Mars Hungaricus* by Pál Esterházy, 1664, in the National Archives of Hungary. After Esterházy 1989.

<sup>41</sup> Kovács – Rózsás 2010, 631, Fig. 13.

<sup>42</sup> Barcs, Nagyhid u. 7 (Henézi-kert /'garden'/). Survey by Gábor Serlegi and Bence Vágvolgyi, HAS RCH Institute of Archaeology, 2016.

<sup>43</sup> Between 1989 and 1994, test excavations with test trenches were conducted in the territory of the fort. In 2002–2003 a larger area was uncovered in the framework of an extensive rescue excavation. The uncovered surface of about 1500 m<sup>2</sup> makes nearly one-quarter of the territory of the fort that is assumed to cover 0.6–0.7 hectare (90×70 m).

<sup>44</sup> There are numerous commonalities between the material from the Ottoman-era settlement of Barcs and the Turkish palisade fort.

<sup>45</sup> Sümegi et al. 2016, 40–49.



**Fig. 12.** The section of the Drava valley in question on the First Military Survey, 1782

living in the fort and might have influenced the lives of the neighbouring settlements, as well.

In the period in question, it was not only the waters and riverbeds that were changing, but also the climate had transformed dramatically. The signs of the Little Ice Age – cold winters, and cool, rainy summers – became more distinct from the end of the 16<sup>th</sup> century onwards,<sup>46</sup> and the difficulties caused by this determined everyday life even more in the 17<sup>th</sup> century. Winter 1664, the January month of the winter campaign, for example, was described as very harsh by Evliya Çelebi who was travelling in the region at that time.<sup>47</sup>

As the environment had changed, the inhabitants of settlements had to adapt to the new riverbeds, dead channels, and floodplains. For example, the old settlement of Barcs (today the site Barcs-Pusztabarcs) – once situated at the foot of the high mound in the Drava bend – existing in the Middle Ages and in the Ottoman period, had been abandoned by the end of the period. Its inhabitants settled near the ruins of the Ottoman castle already at the end of the 17<sup>th</sup> century, and thus laid the foundation for the 18<sup>th</sup> century urban development.<sup>48</sup>

According to written documents, floodplain pig breeding was typical of the floodplain areas of the Drava, like it had been in the Middle Ages, but the area was also suitable for large herds of cattle driven on the routes of South Transdanubia. Vegetable production was also significant. The area was characterized by extensive woodlands, swamps and oxbow lakes (Figure 12).<sup>49</sup> In the 16–17<sup>th</sup> centuries, the extraction and destruction of woodlands also reached a new level of magnitude owing to various factors – such as castle construction and maintenance, developing industry and military use, the needs of large-scale cattle breeding and droving for pastures, the needs of river navigation, mills, bridges and river-crossing places for timber, and last but not least, the very significant use of firewood.

The construction of the 16–17<sup>th</sup> century palisade fort and the needs of daily life also influenced the size of the deforested area around Barcs. When the fortification was constructed, as much as 1100–1200 palisade poles alone were required for the castle wall.<sup>50</sup> Nevertheless, during the nearly 100 years of existence of the fort, the amount of timber used for its maintenance and by its garrison was many times more than that.

<sup>46</sup> Rácz 2003, 236–241.

<sup>47</sup> Evlia 1985, 440–442.

<sup>48</sup> The 1689–1692 census of the Treasury, which records the ditches of the old »Turkish-era Wachthauß«, also provides information on the closer surroundings of Barcs: »700 acres of arable land, – 400 falc[astrum] of hayfield. – The 1000 acres of woodland comprised 700 acres of birch forest and 300 acres of oak forest. In the latter pigs were mast-fed, while in the former sheep were grazing. – Sandy soil, hayfields, and swamps«, [falc[astrum] = a unit of area, a piece of meadow that one person can scythe in one day on average]. MNL OL E 156-a. Fasc. 136. No. 030 (U et C); [https://archives.hungaricana.hu/hu/urbarium/hu\\_mnl\\_ol\\_e156\\_a\\_fasc136\\_no030/?list=eyJxdWVyeSI6ICJiYXJjcyJ9](https://archives.hungaricana.hu/hu/urbarium/hu_mnl_ol_e156_a_fasc136_no030/?list=eyJxdWVyeSI6ICJiYXJjcyJ9) (last accessed November 17, 2019)

<sup>49</sup> This is also suggested by contemporary records (see, for example, Evlia 1985, 552, 554, 571, 577; Esterházy 1989, 139–140). In addition, the 18<sup>th</sup> century First Military Survey (1782–1785), which partly still preserves 17<sup>th</sup> century conditions, also shows this indirectly.

<sup>50</sup> Kovács – Sümegi 2011, 115–118.

## SZIGETVÁR

In recent years, one of the largest research projects in the region has been related to the Ottoman-era settlement discovered in the Turbék vineyard near Szigetvár, as well as the *türbe* (shrine) of Suleiman the Magnificent, and the fortification built around the *türbe* and its surroundings. In the framework of the research project led by Pál Fodor and Norbert Pap, the study of historical sources, environmental reconstructions, non-destructive geophysical surveys, airborne laser scanning (LIDAR), geoinformatics and geoarchaeological investigations, field walking surveys and excavations have been carried out.<sup>51</sup>

The stronghold of Turbék was built for the supervision and maintenance of the sultan's *türbe* in the 1570s,<sup>52</sup> but the South Transdanubian palisade castle was also part of the Ottoman border fortress system along the Drava. According to the entries of the Ottoman pay-rolls from 1577–78, only a few soldiers served here. At first, there were 21 and 27, later 40, and in the 17<sup>th</sup> century nearly 70 people,<sup>53</sup> including the religious staff serving at the *türbe* and mosque. Within a few years, an urban-like settlement emerged next to the *türbe* and its palisade. According to the 1579 register of the *sanjak* of Szigetvár, this settlement (*kasaba*) had two quarters (*mahalle*).<sup>54</sup> The palisade was burnt down in 1664, during the winter campaign and was subsequently rebuilt. After the recapture of Szigetvár by Christian forces in 1689, its role and importance faded away, and in 1693 the *türbe* was demolished as well.

In the framework of the research project, the excavations in the Turbék-Zsibót vineyard supervised by Erika Hancz in 2015–17, brought to light the foundations of stone buildings. They have been identified as the remains of the sultan's *türbe*, a mosque, and a convent of the Khalwati<sup>55</sup> dervishes based on the Esterházy drawing from 1664 and other, documentary sources.<sup>56</sup>

The Esterházy drawing of the Turbék palisade is the only known contemporary ground plan (similarly to the Berzence and Barcs forts) (Figure 11.3).<sup>57</sup> The drawing, like other drawings, is a sketch that contains realistic elements, but it is not authentic in terms of details. If we compare the results of the excavations and the drawing, it can be seen at first glance that the relative position of the buildings in the drawing is imprecise and the details are sketchy. With the help of a computer graphic comparison, however, the directions could be determined, and blocks of buildings could be identified. The fortification (a building complex around the shrine) seems to have followed the orientation of the sacred buildings (the mosque and the *türbe*), it must have had a northwest–southeast orientation. At the same time, the excavations demonstrated that, in contrast to the depiction of the drawing, the mosque and the shrine were two separate buildings (Figure 13), and the *türbe* has a square-shaped ground plan, therefore the classic octagonal is an imaginary element in the drawing (unless it meant to represent a polygonal building erected on a square base). During archaeological research the L-shaped structure of the dervish convent also revealed, therefore the *türbe* and the sacred building complex around the *türbe* became fully known.

The stronghold refurbished after its destruction by fire in 1664 was described by Evliya Çelebi.<sup>58</sup> He also reported about the location (»a promenade covered with vines«),<sup>59</sup> the shape of the fortification built in the form of a palisade (»elongated«), and other buildings connected to the daily life of the settlement (a mosque, a madrasah, a caravanserai, steam baths, and shops). Evliya points out that after its reconstruction, the fort »became very ornate again and a thousand times larger than the previous one.

<sup>51</sup> See contributions to the volume Pap – Fodor (ed.) 2017.

<sup>52</sup> Vatin 2008, 58–60.

<sup>53</sup> Hegyi 2007, II. 1301, 1303, III. 1568–1576.

<sup>54</sup> Vass 1993, 202.

<sup>55</sup> The main feature of the mystical practice of the Khalwati Order of Dervishes was the forty-day lonely retreat (*khalwa*). On these occasions the dervish was reading the Quran in a small cell, and during the rituals he kept repeating the seven names of Allah. They could have only a limited amount of food.

<sup>56</sup> Pap et al. 2015; Fodor – Pap 2016; Hancz 2017; Peker et al. 2019.

<sup>57</sup> Esterházy 1989, 141.

<sup>58</sup> Evlia 1908, 36.

<sup>59</sup> The site as »an orchard that has to be guarded and protected« first appears in an imperial order dated 11 September 1573. Vatin 2008, 57–58. According to the quoted census of the Treasury from 1689–1692 (cf. note 48), which also mentions the sultan's tomb, there were vines and orchards in the Turbék vineyard still at the end of the 17th century. The area looks similar even today.





**Fig. 13.** Aerial photograph of the 2015–2016 excavations at Turbék. <http://szigetvar.btk.mta.hu/galeria/szulejman-szultan-elveszett-zarandokvarosa-2016> (last accessed November 17, 2019)

[...] Its palisade walls and ditches were also much better.« It is important to emphasize that while the drawing was meant to represent in a sketchy way those features that were standing and existed in 1664, the building remains excavated (and to be excavated) also comprise post-1664 constructions, and reveal only their foundations. The remains unearthed so far show more similarities to the building complex of a newly discovered Szigetvár map from 1689.<sup>60</sup>

The excavated material (based on what has been published so far) is partly unique in Hungary, but it is partly identical to other Ottoman castles, such as the artefacts found in the nearby palisade fort at Barcs.<sup>61</sup> Besides the architectural monuments, the environmental historical samples taken from the site are also outstanding. Their analysis is still in progress. While the animal bone finds from the Barcs palisade fort make one of the richest Ottoman-era assemblages known so far from Hungary,<sup>62</sup> the sediment sample from the moat of the Turbék castle is the most significant environment historical material from the Ottoman period in the Carpathian Basin. It comprises tens of thousands of macrobotanical remains, tens of thousands of bones, mollusc shells, eggshells, and charred wood remains.<sup>63</sup>

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## LITERATURE

1. M. Aradi – Rózsás 1994 / M. Aradi Csilla – Rózsás Márton: A középkori Valkó templomának régészeti feltárása (The results of the archeological excavation at the parish church of the medieval settlement Valkó). *Somogyi Múzeumok Közleményei* 10 (1994) 95–104.
2. ÁÚO / Wenzel Gusztáv: *Árpád-kori Új Okmánytár – Codex Diplomaticus Arpadianus Continuatus* I–XII. N/A, Pest-Budapest, 1860–1874.

<sup>60</sup> <http://www.origo.hu/tudomany/20180312-kalapacs-ala-kerul-az-az-elveszett-terkep-amely-szulejman-sirjat-mutatja.html> (March 12, 2018)

<sup>61</sup> Hancz 2017, 112–128.

<sup>62</sup> Gál – Bartosiewicz 2016, 181.

<sup>63</sup> Geoarchaeological surveys, in: Gyenizse et al. 2017, 173 (Investigations by Pál Sümegi and his colleagues).

3. Borsa 1999 / Borsa Iván: A Somogyi Konvent oklevelei az Országos Levéltárban (Forrásközlés) (Ötödik közlemény) 1371–1380 [Charters of the Somogy Convent in the collection of the National Archives of Hungary (Source publication) (Publication Nr. 5) 1371–1380]. *Somogy megye múltjából* 30 (1999) 32–36.
4. CD 1829–1844 / Fejér, Georgius: *Codex diplomaticus Hungariae ecclesiasticus ac civilis* I–XI. N/A, Buda, 1829–1844.
5. Csánki 2011 / Csánki Dezső: *Körösmegye a XV-ik században* [County Körös in the 15<sup>th</sup> century]. Magyar Tudományos Akadémia, Budapest, 1893. Reprint 2011.
6. Engel 1996 / Engel Pál: *Magyarország világi archontológiája, 1301–1457* [Secular archontology of Hungary, 1301–1457] I–II. MTA TTI, Budapest, 1996.
7. Engel 2001 / Engel Pál: *Magyarország a középkor végén. Digitális térkép és adatbázis a középkori Magyar Királyság településeiről* [Hungary at the end of the Middle Ages. Digital map and database about the settlements of the medieval Kingdom of Hungary]. [CDROM] Budapest, 2001.
8. Esterházy 1989 / Esterházy Pál: *Mars Hungaricus*. Compiled and translated by Iványi Emma. Ed.: Hausner Gábor. Zrínyi-könyvtár III. Zrínyi Kiadó, Budapest, 1989.
9. Evlia 1908 / Evlia Cselebi török világutazó magyarországi utazásai 1664–1666. Török-magyarkori történelmi emlékek. Második osztály: Írók. [Travel accounts of the Turkish world traveller Evliya Çelebi about Hungary, 1664–1666. Historical documents from the Ottoman-Hungarian period. Second Division: Writers]. Magyar Tudományos Akadémia, Budapest, 1908.
10. Evlia 1985 / Evlia Cselebi török világutazó magyarországi utazásai 1660–1664 [Travel accounts of the Turkish world traveller Evliya Çelebi about Hungary, 1660–1664]. Transl.: Karácson Imre. The preface and the glossary were written, and the notes were revised by: Fodor Pál. Gondolat, Budapest, 1985. (Second edition.)
11. Fodor – Pap 2016 / Fodor Pál – Pap Norbert: Szulejmán szultán sírkápolnája nyomában [In search of the tomb of Suleiman]. *Magyar Tudomány* 177:9 (2016) 1057–1066. <http://www.matud.iif.hu/2016/09/05.htm> (January 12, 2017)
12. Gál – Bartosiewicz 2016 / Gál, Erika – Bartosiewicz, László: Animal remains from the Ottoman-Turkish palisaded fort at Barcs, Southwest Hungary. In: »per sylvam et per lacus nimios«. *The Medieval and Ottoman Period in Southern Transdanubia, Southwest Hungary: the Contribution of the Natural Sciences*. Eds: Kovács, Gyöngyi – Zatykó, Csilla. Institute of Archaeology RCH HAS, Budapest, 2016, 181–252.
13. Gyenizse et al. 2017 / Gyenizse Péter – Baranyai Edina – Bertók Gábor – Bognár Zita – Dezső József – Halmai Ákos – Hámosi Zoltán – Sandó Norbert – Sebe Krisztina – Sümegi Pál – Szabó Szilárd – Tomor Tamás – Tóth Tamás: A természettudományos vizsgálatok célja és módszertana Turbék zárandokváros és környéke kutatásában (2013–2016) [The purpose and methods of natural environmental analyses in the study of the pilgrimage town of Turbék and its surrounding region]. In: *Szulejmán szultán Szigetváron. A szigetvári kutatások 2013–2016 között* [Sultan Suleiman at Szigetvár. Investigations at Szigetvár in 2013–2016]. Eds.: Pap Norbert – Fodor Pál. Pannon Castrum Kft., Pécs, 2017, 163–176.
14. Hancz 2017 / Hancz Erika: Nagy Szulejmán szultán szigetvári türbe-palánkjának régészeti feltárása (2015–2016) [Archaeological excavation of the türbe palisade of Suleiman the Magnificent at Szigetvár]. In: *Szulejmán szultán Szigetváron. A szigetvári kutatások 2013–2016 között* [Sultan Suleiman at Szigetvár. Investigations at Szigetvár in 2013–2016]. Eds.: Pap Norbert – Fodor Pál. Pannon Castrum Kft., Pécs, 2017, 89–130.
15. Hegyi 2006 / Hegyi Klára: A török végvár [The Ottoman border fortress]. In: *Szigetvár története. Tanulmányok a város múltjából* [The history of Szigetvár. Studies on the past of the town]. Eds.: Bösze Sándor – Ravazdi László – Szita László. Szigetvár Város Önkormányzata–Szigetvári Várbaráti Kör, Szigetvár, 2006, 93–108.
16. Hegyi 2007 / Hegyi Klára: *A török hódoltság várai és várkatonasága* I–III [The castles and garrisons of Ottoman Hungary]. História Könyvtár, Kronológiák, adattárak 9. História-MTA Történettudományi Intézete, Budapest, 2007.
17. Horvat 2010 / Horvat, Zorislav: Stilska stratigrafija burgova 13.–15. stoljeća u kontinentalnoj Hrvatskoj (Stylistic Stratigraphy of 13<sup>th</sup>–15<sup>th</sup> Century Castles in Continental Croatia). *Prostor* 18. 1 (39) 43–61.
18. Horváth 2005 / Horváth Richárd: Középkori kastélyépítési engedélyek Somogy megyéből [Medieval castle building permits from County Somogy]. *Castrum. Castrum Bene Egyesület Hírlevele*. Budapest, 2005, 13–21.
19. Jankovich 1976 / Jankovich B. Dénes: Adatok a Rinya-völgy középkori településtörténetéhez (Angaben zur mittelalterlichen Ansiedlungs geschichte von Rinyatal). *Somogy megye múltjából. Levéltári Évkönyv* 7 (1976) 3–37.
20. Kolar 1976 / Kolar, Šonja: Arheološki lokaliteti u općini Koprivnica, *Podravski zbornik* 2 (1976).
21. Koppány 1999 / Koppány Tibor: *A középkori Magyarország kastélyai* (Manor-houses and Castles in Medieval Hungary). Művészettörténeti Füzetek 26. Akadémiai Kiadó, Budapest, 1999.

22. Kovács – Rózsás 1996 / Kovács Gyöngyi – Rózsás Márton: A barcsi török palánkvár (The Turkish Hoarding [Palisaded] Castle of Barcs). *Somogyi Múzeumok Közleményei* 12 (1996) 163–182.
23. Kovács – Rózsás 2010 / Kovács Gyöngyi – Rózsás Márton: A barcsi török vár és környéke. Újabb kutatások 1999–2009 (The Ottoman-Turkish Castle at Barcs and Its Surroundings. New Research 1999–2009). In: *A középkor és a kora újkor régészete Magyarországon / Archaeology of the Middle Ages and Early Modern Period in Hungary I–II*. Eds.: Benkő Elek – Kovács Gyöngyi. MTA Régészeti Intézete, Budapest, 2010, II: 621–642.
24. Kovács – Sümegi 2011 / Kovács Gyöngyi – Sümegi Pál: Palánkvárak, fák, erdők. Régészeti és környezet-történeti adatok a török kori palánkvárak faanyag-felhasználásához (Palisade castles, trees, and forests. Archaeological and environment history data on the timber used for Turkish-era palisade castles). In: *Várak nyomában. Tanulmányok a 60 éves Feld István tiszteletére* [On the trail of castles. Studies in honour of István Feld on his 60<sup>th</sup> birthday]. Eds.: Terei György et al.. Castrum Bene Egyesület–Civertan Grafikai Stúdió, Budapest, 2011, 113–120.
25. Kreiter – Pánczél 2016 / Kreiter, Attila – Pánczél, Péter: Petrographic analysis of ceramics from the Ottoman-Turkish fort at Barcs (Hungary) and the neighboring settlements. In: *»per sylvam et per lacus nimios«. The Medieval and Ottoman Period in Southern Transdanubia, Southwest Hungary: the Contribution of the Natural Sciences*. Eds.: Kovács, Gyöngyi – Zatykó, Csilla. Institute of Archaeology RCH HAS, Budapest, 2016, 95–132.
26. Krešimir 2002 / Krešimir Regan: Srednjovjekovna utvrda Sveta Elizabeta (Pepelara) u Prekodravlju (The medieval St. Elizabeth (Pepelara) fort in Prekodravlje). *Kaj: časopis za kulturu i prosvjetu* 35 (2002) 1. 101–106.
27. Magyar 1996 / Magyar Kálmán: Nagyatád és környéke XI–XV századi településtörténete (különös tekintettel a várak és települések rendszerére) (Historical and archaeological relics of Nagyatád and its vicinity in the XI–XV<sup>th</sup> centuries). *Somogyi Múzeumok Közleményei* 12 (1996) 113–159.
28. Magyar – Nováki 2005 / Magyar Kálmán – Nováki Gyula: *Somogy megye várai a középkortól a kuruc korig* (Castles in Somogy county from the medieval period to the Kuruc Era). Somogy Megyei Múzeumok Igazgatósága, Kaposvár, 2005.
29. Miklós 2014 / Miklós Zsuzsa: Légi régészeti kutatások a Dráva magyarországi oldalán. Kézirat 2014. [Aerial archaeological investigations on the Hungarian side of the Drava. Manuscript 2014]. In: *The Medieval and Ottoman Period in Southern Transdanubia, Southwest Hungary: the Contribution of the Archaeology*. Eds.: Kovács, Gyöngyi – Zatykó, Csilla. Institute of Archaeology RCH, Budapest, under edition.
30. Pap – Fodor (eds.) 2017 / Pap Norbert – Fodor Pál (eds.): *Szulejmán szultán Szigetváron. A szigetvári kutatások 2013–2016 között* [Sultan Suleiman at Szigetvár. Investigations at Szigetvár between 2013 and 2016]. Pannon Castrum Kft., Pécs, 2017.
31. Pap et al. 2015 / Pap, Norbert – Kitanics, Máté – Gyenizse, Péter – Hancz, Erika – Bognár, Zita – Tóth, Tamás – Hámori, Zoltán: Finding the Tomb of Suleiman the Magnificent in Szigetvár, Hungary: Historical, Geophysical and Archeological Investigations. *Die Erde* 146:4 (2015) 289–303.
32. Peker et al. 2019 / Peker, Ali Uzay – Başak, Meral Özdengiz – Deveci, Abdullah – Uzun, Mehmet Cihangir – Sertel, Sinan – Pap, Norbert – Hancz, Erika: Zigetvar Kanunî Sultan Süleyman Türbe-Palankası'nda Araştırma ve Arkeolojik Çalışmalar 2015–2017. In: *Akdeniz Sanat Dergisi. Özel Ek Sayı: 21. Uluslararası Ortaçağ ve Türk Dönemi Kazıları ve Sanat Tarihi Araştırmaları Sempozyumu*, 25–27 Ekim 2017, Cilt: 13/23, Antalya: Akdeniz Üniversitesi, 2019, 93–157.
33. Petrić 1992 / Petrić, Hrvoje: Srednjovjekovni putevi u Podravini. *Podravski zbornik* 18 (1992) 41–46.
34. Rácz 2003 / Rácz, Lajos: The Climate History of Central Europe in the Modern Age. In: *People and Nature in Historical Perspective*. Eds.: Laszlovsky, József – Szabó, Péter. Central European University, Budapest, 2003, 229–245.
35. Radić – Bojčić 2004 / Radić, Mladen – Bojčić, Zvonko: *Srednjovjekovni grad Ružica*. Muzej Slavonije, Osijek, 2004.
36. Rózsás 1993 / Rózsás Márton: Perembélyeges középkori kerámiatöredékek a Dráva Múzeum régészeti gyűjteményében [Medieval pottery sherds with stamped rim in the archaeological collection of the Dráva Museum]. *Gyökerek. Dráva menti honismereti folyóirat* 1993 tavasz, 50–58.
37. Rózsás 2006 / Rózsás Márton: Középkori és kora újkor hulladékgödrök Barcs-Pusztabarcsról [Medieval and early modern refuse pits from Barcs-Pusztabarcs]. *Gyökerek. A Dráva Múzeum tanulmánykötete*, Barcs, 2006, 11–42.
38. Salajić 2014 / Salajić, Silvija: *Srednjovjekovna nizinska utvrda u Virovitici*. Gradska muzej Virovitica, Virovitica, 2014.
39. Srednjovjekovna naselja 2017 / *Srednjovjekovna naselja u svjetlu arheoloskih izvora* (Mediaeval Settlements in the light of Archaeological Source). Zbornik Instituta za Arheologiju, Knjiga 6. Eds.: Sekelj Ivančan, Tajana et al. Institut za arheologiju, Zagreb, 2017.



40. Sümegi et al. 2016 / Sümegi, Pál – Molnár, Dávid – Náfrádi, Katalin – Páll, Dávid Gergely – Persaits, Gergő – Sávai, Szilvia – Törőcsik, Tünde: The environmental history of Southern Transdanubia during the Medieval and the Ottoman period in the light of palaeoecological and geoarchaeological research. In: »per sylvam et per lacus nimios« *The Medieval and Ottoman Period in Southern Transdanubia, Southwest Hungary: the Contribution of the Natural Sciences*. Eds. Kovács, Gyöngyi – Zatykó, Csilla. Institute of Archaeology RCH HAS, Budapest, 2016, 15–73.
41. C. Tóth 2004 / C. Tóth Norbert: A somogyi konvent oklevelei az Országos Levéltárban. (Forrásközlés) (Kilencedik közlemény) 1441–1453. (The records of the convent in Somogy county in the National Archives (Source publication) (Publication Nr. 9) 1441–1453). *Somogy megye múltjából* 2003–2004, 9–38.
42. *Urbaria et Conscriptiones / Urbaria et Conscriptiones*. Művészettörténeti adatok 2. füzet [Art historical data. Part 2]. Laák-Zsámbók. Ed.: Henszlmann Lilla. A Művészettörténeti Dokumentációs Központ forráskiadványai IV. Budapest, 1967.
43. Vass 1993 / Vass Előd: Szigetvár város és a szigetvári szandzsák jelentősége az Oszmán-Török Birodalomban 1565–1689 [The role of the town of Szigetvár and the Szigetvár *sanjak* in the Ottoman Empire 1565–1689]. In: Tanulmányok a török hódoltság és a felszabadító háborúk történetéből. A szigetvári történetész konferencia előadásai a város és a vár felszabadításának 300. évfordulóján [Studies on the history of the Ottoman occupation and the wars of independence. Papers delivered at the conference of historians at Szigetvár on the 300<sup>th</sup> anniversary of the recapture of the city and castle]. Ed.: Szita László. Baranya Megyei Levéltár és a Magyar Történelmi Társulat Dél-dunántúli Csoportja, Pécs, 1993, 193–217.
44. Vatin 2008 / Vatin, Nicolas: Egy türbe, amelyben nem nyugszik senki. Megjegyzések Nagy Szülejmán szigetvári sírkápolnájának alapításához és rendeltetéséhez [A *türbe* in which nobody rests. Notes on the foundation and function of the tomb of Suleiman the Magnificent in Szigetvár]. *Keletkutatás* 2008, tavasz–ősz, 53–72. [Original text: Une türbe sans maître. Note sur la fondation et la destination du türbe de Soliman-le-Magnifique à Szigetvár. *Turcica* 37 (2005) 9–42.]
45. Večenaj-Tišlarov 1989 / Večenaj-Tišlarov, Ivan: *Tajna dvorca Pepelare (Sv. Elizabete), Prekodravlje u povijesti, legendi i priči*, knjiga prva. Društvo Podravec, Gola, 1989.
46. Végh 1974 / Végh József: *Somogy megye földrajzi nevei* (Toponyms in Somogy county). Akadémiai Kiadó, Budapest, 1974.
47. Viczián – Zatykó 2011 / Viczián, István – Zatykó, Csilla: Geomorphology and Environmental History in the Drava Valley, near Berzence. *Hungarian Geographical Bulletin* 60 (2011) 4. 357–377.

## ABBREVIATIONS

MNL OL DL – Magyar Nemzeti Levéltár, Országos Levéltár, Diplomatikai Levéltár (Hungarian National Archives, Diplomatic Archives)

RRM RA – Rippl-Rónai Múzeum Régészeti Adattár (Rippl-Rónai Museum, Archaeological Archives)

## SAŽETAK

Dravska dolina ima brojne jedinstvene značajke kao povijesno-geografsko područje. U našoj prezentaciji predstavljamo rezultate istraživanja provedenih u različitim područjima (okolica gradova Berzence / Brežnica, Barcs / Barč i Szigetvár / Siget) koji ne samo da geografski karakteriziraju pojedine dijelove doline Drave, već i istraživačke metode koje ističu važne aspekte dvoraca u regiji, kao i njegova naselja i povijest okoliša, što se odražava na raspoloživim resursima. Rezultati povijesnih, arheoloških i znanstvenih istraživanja pokazuju da se pridružuje regijama i zajednicama te da je s tog aspekta dominantna značajka u regiji.

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